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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/474,542 | 12/29/1999 | ELWYN B. DAVIES | 476-1884 | 2366 |

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EXAMINER

HA, YVONNE QUY M

| | |
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| ART UNIT | PAPER NUMBER |
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2697

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/474,542

Applicant(s)

DAVIES, ELWYN B. 

Examiner

Yvonne Q. Ha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The amendment filed on 4/30/03 has been fully considered but they are not persuasive. Amended claims 1, 7-9 have been entered. Claims 1-9 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertin et al. (US Patent 5,940,372) in view of Masuda et al. (US Patent 6,201,810).

Referring to claims 1, 7-9, Bertin discloses a method of operating a connectionless network (col. 5, line 12) to provide a priority routing service (col. 5, line 42-43 reserve the service by traffic type) for a network user having a plurality of customers communicating with said user via said network (figure 2, access nodes 202-205 connected to users/customers), the network comprising a plurality of network elements and links between (col. 7, line 1-35, and 48-53, figure 2), the method comprising: maintaining an express route comprising one or more said links between two end element (col. 6, line 23-25, best route is selected during congestion, i.e. express route is to bypass on congestion point); at least one said end element arranged to identify data packets originating from said user (col. 5, line 13-15) and destined for a said customer (col. 5, line 15-19 route toward destination based on label; routing is bi-directional so it could be from user to customer or customer to user, i.e. source to destination or vice versa) or originating from

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a said customer and destined for said user (col. 5, line 15-19 route toward destination based on label; routing is bi-directional so it could be from user to customer or customer to user) and diverting said packets along said express route (col. 5, line 42-45 reserved bandwidth to provide the level of service required by the traffic type, i.e. express route is a type of reserved bandwidth and bypassing congestion point; the level of service is also categorize as express route to bypass congestion point). Bertin does not expressly disclose monitoring network to determine an actual or expected, congestion point where the express route bypasses congestion point. However, Masuda discloses the congestion status monitor unit a cues length and increasing rate of a self-buffer are monitored to detect the congestion status of every output port (col. 5, lines 52-54). The monitor cell is collected by each connectionless communication device is provided with information indicating a buffer congestion status every output unit of the adjacent connectionless communication device (col. 6, lines 11-22, figure 1, references 12, 14, and figure 8). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Bertin and Masuda of best route (i.e. express route) during congestion and monitoring the congestion status because the conventional routing control system cannot performed at high speed due to the fact that the traffic amount is increased and the information exchange has limited to real time processing which results in low optimum performance routing operation. To achieve a high speed routing control system, a bypassing path could be selected where an optimizing unit selects a path candidate containing no congested link from the plural path candidates on the basis of congestion statuses. One of ordinary skill in the art would have been motivated to combine Bertin and Masuda teaching to achieve the satisfaction of QoS

requirement from users is ensured and to provide a high speed routing control system that can select the optimum path and increase the speed of the switching processing to a bypass path.

Referring to claim 2, Bertin discloses all aspects of the claimed invention and further teaches a route is bi-directional, both said end elements being arranged to identify and divert said packets (col. 5, line 12, distributed routing for connectionless network is bi-directional where traffic is identified based on label and divert accordingly).

Referring to claim 3, Bertin discloses all aspects of the claimed invention and further teaches reserving bandwidth on said links forming said route (col. 5, line 39-40, bandwidth reservation is based on the level of service).

Referring to claim 4, Bertin discloses all aspects of the claimed invention and further teaches a route has one end element adjacent or forming the network entry point of said user (col. 5, line 51-53).

Referring to claim 5, Bertin discloses all aspects of the claimed invention and further teaches diverting step comprises modifying a forwarding table within one said end element such that data packets having a destination address corresponding to said user are diverted along said route (col. 5, line 46-48, line 54-58, table is maintained of the network configuration and traffic load on the links, and the routing again is based of the level of service on reserved bandwidth).

Referring to claim 6, Bertin discloses all aspects of the claimed invention and further teaches filtering data packets within the other said end element such that data packets having a source address corresponding to said user are diverted along said route (col. 8, line 50-54, to calculate the optimum paths through the network with the level of service by the user, packets are diverted accordingly).

Response to Arguments

4. Applicant's arguments filed on 4/30/03 have been fully considered but they are not persuasive. New ground of rejection is presented to amended claims 1, 7-9. In addition, the examiner responds to the arguments as follows: First, the argument states that Bertin only addresses the best effort service routing but not mentioning express route (page 5, line 15 of amendment). It is the examiner's position to interpret the best efforts service as providing an efficient bandwidth management with a guaranteed quality of service, which means deliver data as fast as possible (i.e. express route achieves the same goal as well). Second, the argument states that Bertin does not suggest the best effort service routing but not mentioning express route (page 6, line 3-4 of amendment). It is the examiner's position to interpret data packets originating from a user is the same as source node, as described in Bertin. Routing is normally bi-direction, which means originate from one end and destine to another end or vice versa. Bertin also teaches determining the optimal route between the origin and destination node by selecting links of lowest weights (col. 6, lines 34-36). Third, the argument states that Bertin does not suggest a reserved bandwidth path is setup in response to determining a congestion point (page 6, line 7-11 of amendment). It is the examiner's position to interpret determining the optimal route between the origin and destination node by selecting links of lowest weights (col. 6, lines 34-42, factors excess traffic weight, reserved traffic weight) where the weighing function dependent of the traffic exceeding the reservable bandwidth. Fourth, the argument states that Bertin does not teach source address corresponding to a predetermined user (page 6, line 19 of amendment). It is the examiner's position to interpret source address is the user address or access node. In addition, new ground rejection is presented to amended claims 1, 8, and 9. Please refer to argument related

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to monitoring to those rejections. Therefore, the examiner concludes the rejection claims 1, 8, and 9 under 102(b).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Masuda et al. (US Patent 6,201,810) discloses high speed routing control system
- Farris et al. (US Patent 6,574,216) discloses packet data network voice call quality monitoring
- Farris (US Patent 6,064,653) discloses internetwork gateway to gateway alternative communication

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne Q. Ha whose telephone number is 703-305-8392. The examiner can normally be reached on Monday-Friday 7a.m.-4p.m. Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3988 for regular communications and 703-305-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

YQH
June 27, 2003


RICKY NGO
PRIMARY EXAMINER